

Flood Preparedness and Mitigation Guide

Museum Flood Area Hotline: (928) 679-8525

Museum Flood Area Email: museumfloodinfo@coconino.az.gov

Museum Flood Area Webpage: www.coconino.az.gov/museumfire/floodarea

COCONINO
COUNTY ARIZONA
FLOOD CONTROL DISTRICT



Museum Flood Area



Emergency Notifications
Coconino.az.gov/ready

Sign Up for Emergency Notifications!

COCONINO COUNTY'S free Emergency Notification service provides alerts for emergencies such as wildfires, thunderstorms, tornadoes and flash flooding in your area. Sign up your cell phone number, email and/or your home phone.

Go to www.coconino.az.gov/ready to sign up for Emergency Notifications or contact the Coconino County Emergency Department at 928-679-8311.

THE RISK IS REAL. Purchase or renew your flood insurance now.

The County
strongly
encourages
all Museum
Flood area
property



owners to purchase and maintain flood insurance. Flood insurance should be maintained even in those areas where flood mitigation measures have been constructed. Flood insurance remains the only way to address impacts to homes from flooding.

For more information about the National Flood Insurance Program please call 1-800-427-4661 or visit www.floodsmart.gov.



Dear Museum Area Resident and Property Owner,

Thank you for your interest in the 2020 *Museum Flood Preparedness & Mitigation Guide*. With summer rapidly approaching, this year's Guide offers flood preparation guidelines and resources to help keep you and your family aware, informed and safe during the monsoon season. In addition, the Guide has information regarding emergency notification, sandbag maintenance and Coconino County Flood Control District (FCD) and City of Flagstaff (CoF) preparation activities to help you throughout monsoon season. Your safety during the monsoon season is of paramount concern to us.

This Guide is essential reading for everyone who lives or owns property in the Museum Flood area because the threat of flooding is real, and because your property will remain at high risk for post-wildfire flooding for several years. Although we were fortunate not to have experienced any flooding last summer, it is very important to remember that 2019 was the driest monsoon season on record and that post-wildfire sediment flows were still observed coming from the forest. This, coupled with a very dry winter, means that it is crucial for residents not to be complacent but prepared for flooding from what will probably be an active monsoon season.

The Guide also has information about long-term flood mitigation projects, including the FCD's Alluvial Fan Stabilization Project and an off-forest project to remove sediment from basins on Wildrose Trail in Mt. Elden Estates. The City has also invested in mitigation-related projects such as the Spruce Avenue Wash Rock Vane Weirs and the Linda Vista Drainage Crossing Improvements. These projects provide additional flood mitigation; however, it remains extremely important to remember that these measures can only help mitigate, not eliminate, the threat of flooding. Once again, the threat of dangerous flash flooding will remain in the Museum Flood area for years to come.

Please know that Coconino County and the City of Flagstaff continue to stand with you and are working hard on your behalf. We thank you for your continuing cooperation and hope you find the information in this Guide valuable and supportive.

Elizabeth "Liz" Archuleta
County Chairwoman
District 2 Supervisor

Coral Evans
Mayor
City of Flagstaff

Art Babbott
County Supervisor
District 1

Flood Control District Mission

The Coconino County Flood Control District (FCD) is charged with reducing the risk of flood loss; minimizing the impact of floods on human safety, health and welfare, and restoring and preserving the natural and beneficial values served by floodplains.



Museum Fire

On Sunday, July 21, 2019, the Museum Fire broke out in the Dry Lake Hills area above Flagstaff. The fire ultimately charred 1,961 acres, including a significant portion of the Spruce Avenue Watershed, much of it severely or moderately burned, which means that the soil was “fried” and will act like glass and shed water rapidly, a condition known as “hydrophobic soils” as was witnessed after the Schultz Fire in 2010.

Emergency Flood Mitigation Response

Within 24 hours of the fire’s start, FCD’s staff and consultants began analyzing the expected flood impacts using state-of-the-art technology and

applying the lessons learned from both the Schultz Fire and Flood and Slide Fire and Flood experiences. As the Museum Fire raged, the FCD’s role shifted to emergency response to help mitigate the future threat of post-wildfire flooding in downstream neighborhoods. Guided by a team of County, City and local engineering firms, the FCD produced and installed over 600,000 sandbags and placed 6,600 linear feet of barriers to help mitigate the effects of flooding for over 400 homes and 35 businesses. The City installed debris bollards at the Linda Vista Ave. Culvert and the Dortha Stormwater Inlet, cleared and removed vegetation from more than a mile of both open channels and utility easements and cleaned 1.2 miles of City alleyways.

Flagstaff Water Services Mission

To professionally and cost-effectively provide water, wastewater and stormwater services that meet the present and future environmental, health, and safety needs of the community.



of the fire’s start, the FCD’s staff and consultants were planning neighborhood flood mitigation.

produced and installed:

over
600,000
SANDBAGS

6,000
 linear feet of barriers

IN JUST OVER
TWO
 weeks

Museum Flood Area

For more information please visit
www.coconino.az.gov/MuseumFire/FloodArea

Get Your Sandbags Ready for Monsoon Season

SANDBAGS... KEEP THEM IN PLACE!

After almost a year, some residents might wonder if they still need to keep their sandbag walls in place. They should for several important reasons:

- High Risk for Flooding
- Dry Monsoon Season + Mild Winter = No Test of Mitigation
- Removing Sandbags could cause adverse impacts to your neighbors

Property Owners are Responsible for Sandbag Maintenance

First and foremost, it is important to understand that sandbag maintenance is the responsibility of Property Owners. This includes repairs to sandbag walls and the disposal of old or damaged sandbags.

Check Your Sandbags Before Monsoon Season

A properly built and maintained sandbag wall can prevent or reduce flood damage to your home. However, sandbags are susceptible to the elements, especially ultraviolet (UV) rays from the sun, and do need periodic maintenance to keep them in good working order.

It's crucial to check sandbag walls before the start of monsoon season and replace those that are torn or otherwise damaged. Also, you can prolong the life of your sandbags by covering them in dark plastic sheeting (clear plastic sheeting will not protect against UV rays). Thicker sheeting will last the longest and also help protect your sandbags against rain and snow. Plastic sheeting in a variety of colors and thicknesses is available at any hardware store.

See the accompanying diagram for more information on building an effective sandbag wall. Need

more information? Check out the FCD's sandbag wall-building video, which helped residents in the Schultz Flood area, at www.coconino.az.gov/How2BuildandInstallSandbagWalls.

Pre-Monsoon Sandbag Deployment & Locations

The FCD also recently placed pallets of sandbags throughout the neighborhoods to make it more convenient for residents to replace their sandbags. For more sandbag information please visit www.coconino.az.gov/MuseumFire/FloodArea. The FCD and the City will again be offering filled replacement sandbags at 2625 N. King Street and a "self-fill" sandbag station will be available at Joe Montalvo Park (2230 E Spruce Ave).

Sandbag Disposal

The FCD and City strongly encourage all property owners to keep their sandbags in place and not to dispose of them at least until after the 2020 monsoon season. If you have to dispose of them, then please note that filled sandbags cannot be put in City trash cans or placed curbside for City bulk pickup. Sandbags can either be taken to the Cinder Lake Landfill at 6770 Landfill Road or, if they are in good shape, returned to the sandbag station at 2625 N. King Street. Please note that sandbags also can be cut open so that the cinders can be spread on unpaved portions of properties such as driveways or in garden areas. Empty sandbags can be put in trash receptacles. Please do not dump cinders in the street gutters.

Sandbag Assistance

Residents who are elderly or have disabilities that prevent them from repairing their sandbag walls adjacent to their homes can call 928-679-8525 for assistance.



Water Diversion & Legal Considerations

Efforts by property owners or tenants to keep water off of their properties could have consequences for their neighbors and result in liability for the person diverting the water. The law in Arizona regarding water diversion is based primarily on court decisions rather than statute. Different rules apply depending on whether the water that is diverted is surface water, flood water or water that has been previously captured in a stream or water course.

It is important to be careful that your mitigation efforts do not increase the flood hazard to your neighbors both upstream and downstream. You may be legally liable for damage. The County cannot consult as to the legality or illegality of water diversion on private property.

The Arizona Attorney Magazine published an article by attorney David L. Abney that has a good summary of water diversion law in Arizona. This article is available in the County's Law Library and can be found at www.coconino.az.gov/WaterDiversion.

High Risk for Flooding

The Spruce Avenue watershed, which was impacted by the Museum Fire, was identified as being at high risk for post-wildfire flooding, which would impact many residences and businesses downstream. The placement of sandbags and other flood mitigation in your neighborhood was based on science and the lessons learned from the Schultz and Slide fires. This science included a previously conducted FEMA-funded County-wide post-wildfire flood risk study, which created a flood model for the Spruce Avenue watershed, which burned during the Museum Fire.

Dry Monsoon Season + Mild Winter = No Test of Mitigation

The National Weather Service (NWS) classified the 2019 monsoon season as the driest since record keeping began in 1898 (as recorded at the Flagstaff Airport) with the San Francisco Peaks area receiving only about 20 percent of its normal rainfall amount. The Museum Fire Burn Scar received only about 2.5 - 3.7 inches of rainfall during the 2019 monsoon season, which is about 35 percent of normal monsoon precipitation. The rainfall that did fall on the burn scar was light to moderate in character and therefore

did not create significant post-wildfire flooding downstream.

This means that, after an average winter with little snow melt runoff, the sandbag walls and other emergency flood mitigation measures in your neighborhood still have not been tested against anything close to normal rainfall or runoff conditions.

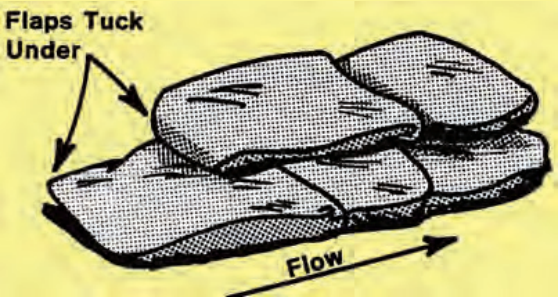
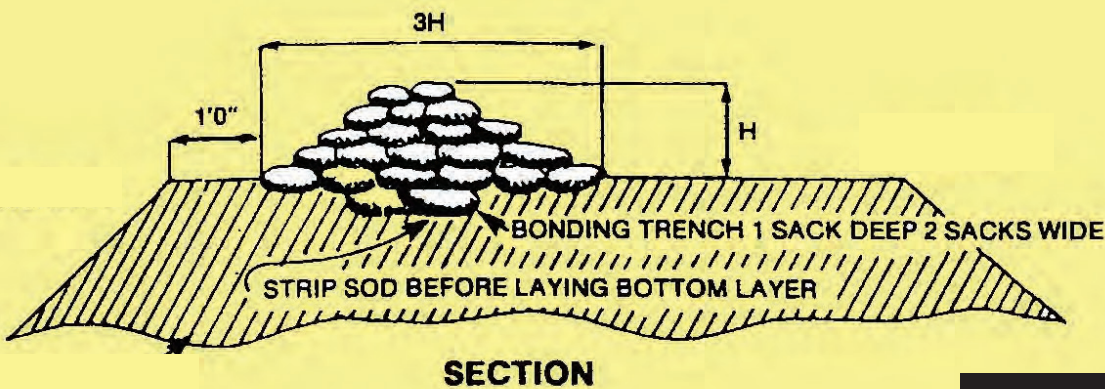
Removing Sandbags Could Cause Adverse Impacts

The sandbags and barriers installed in the Museum Flood area were designed to convey floodwaters downstream and out of your neighborhood. Because of the nature of water, this flood mitigation needs to be contiguous - not piecemeal - with no gaps. Removal of any section of this mitigation from an individual property may compromise the effectiveness of this system and could result in adverse flooding effects on adjacent properties, for which the private property owner who removed the mitigation could be held responsible for any damage.

For these reasons, the FCD and City strongly encourage all property owners to keep their sandbags in place and not to dispose of them until at least after the 2020 monsoon season.

CONSTRUCT A SANDBAG WALL

The pyramid placement method is used to increase the height of sandbag protection. Place the sandbags to form a pyramid by alternating header courses (bags placed crosswise) and stretcher courses (bags placed lengthwise). Stamp each bag in place, overlap sacks, maintain staggered joint placement, and tuck in any loose ends.



Visit Fema.gov for additional sandbag information.

Flood Preparation: Getting Ready for Monsoon Season

The possibility of flash flooding during monsoon season is a fact of life in post-wildfire areas. Due to the topography of the Museum Flood area, flash floods will give very little warning before they hit downstream neighborhoods.

It is imperative that residents in the Museum Flood area prepare themselves for flash flooding during the coming monsoon season. Following are some tips to help keep you and your family safe:

Sign Up for Emergency Notifications

Coconino County's free Emergency Notification service provides alerts for emergencies such as wildfires, thunderstorms, tornadoes and flash flooding in your area. Sign up your cell phone number, email and/or your home phone.

Go to www.coconino.az.gov/ready to sign up for Emergency Notifications, or please contact the Coconino County Emergency Management Department at (928) 679-8311.

Know the Museum Flood Area Emergency Alert Process

Coconino County will issue Emergency Notifications for flash flooding when the rain gauges installed on the Museum Fire burn area reach a certain level or threshold measured in inches of rainfall. When a specific level of rainfall or threshold is reached, then an Emergency Notification will be issued to certain areas as described here.

Have An Emergency Preparedness & Communication Plan

Because flash flooding can strike unexpectedly, it is important that you and your family plan well in advance of monsoon season. Planning should include sheltering in place. If you are at work and get the emergency alert, do not go back into the flood area. Know how you will contact family members, how you will get back together and what you will do in different situations. Emergency preparedness and family communication plan brochures from the Arizona Emergency Information Network (AZEIN) are available in English and Spanish at www.coconino.az.gov/MuseumFire/FloodArea.

Be Prepared to Shelter in Place

All Museum Flood area residents should be prepared to shelter in place during a flood event and have emergency Stay Kits for their homes that contain enough supplies to support their families for at least 72 hours. Build a kit that includes nonperishable food and potable water and provides for the needs of your family, including children

and sick individuals. Other Stay Kit recommended items include:

- Prescription medications and eyeglasses
- Flashlight(s) with extra batteries
- First aid kit
- Battery-powered or hand-crank radio
- Personal hygiene items
- Important papers (e.g., insurance and financial)
- Cash (e.g., small bills and coins)
- Cell phone and charger
- Manual can opener
- Pet supplies
- Copy of your Family Communication Plan

In case you need to leave, there is information about creating a Go Kit at www.coconino.az.gov/GoKit

Know Your Weather

If the National Weather Service (NWS) issues a Flash Flood Warning for the Museum Flood area, then residents should immediately activate their family action plan. Your plan will



Emergency Notifications

Coconino.az.gov/ready

be unique to your family based upon where you live in the flood area and the level of risk, as well as your family's individual situation. There will be little time between the Flash Flood Warning and the flood.

Please check Museum Fire scar weather conditions and warnings regularly at <https://www.weather.gov/fgz/MuseumFireFloodRisk>.

Have a Weather Radio

As we all know, weather can change very rapidly during monsoon season. A battery powered weather radio is another great tool for keeping up with monsoon season storms.

Preparing Your Property for Flash Flooding

Prior to the monsoon season, survey your property and strongly secure all objects. Loose objects like chairs, tables, BBQs etc. will become dangerous floating objects during a flash flood. Remember to clear out any drainages of obstructions such as downed trees and debris. Also, know where your gas & water shutoffs and electrical circuit breaker panel are located and how to turn these utilities off.

Know Your Area's Rainfall Threshold and Alert Notifications

Rainfall Gauge Threshold #3

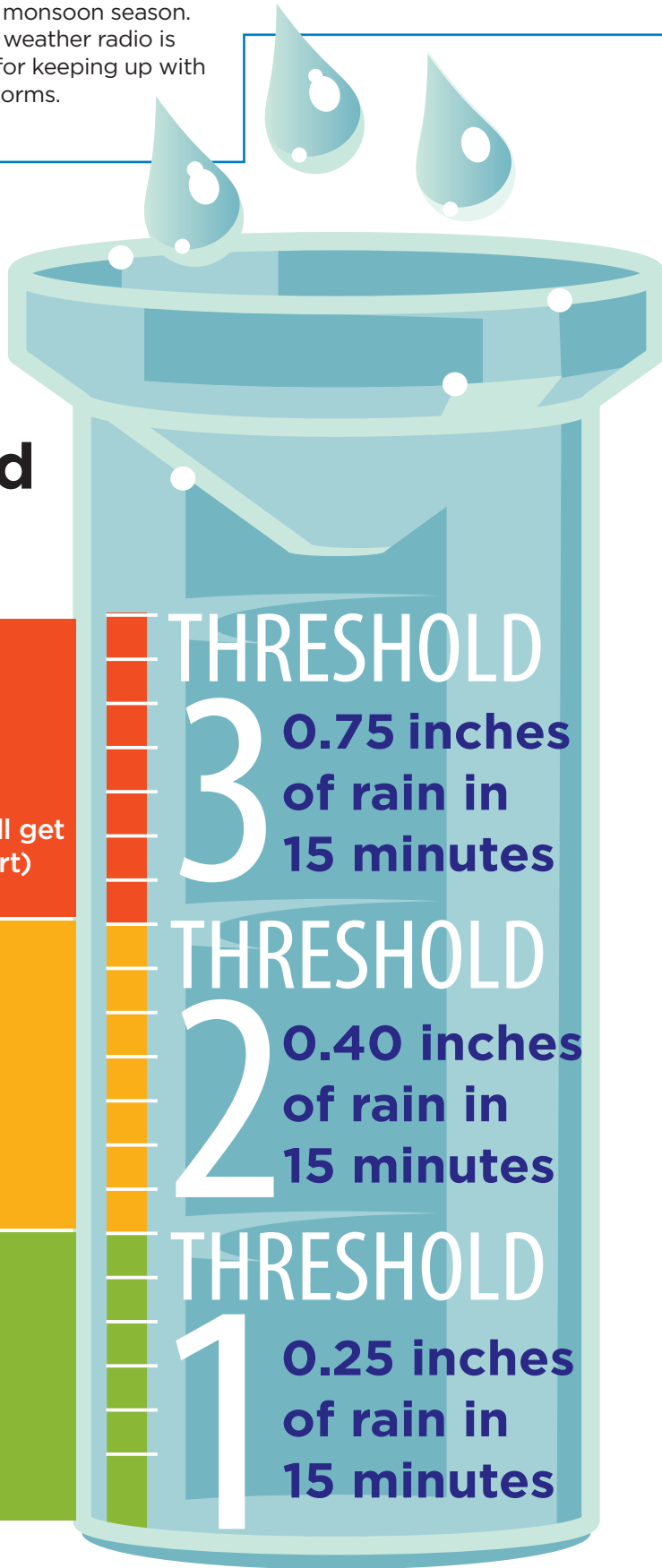
When this threshold is reached, the following occurs: An **Emergency Notification Alert will be issued for the entire Museum Flood area: Mt. Elden Estates, Paradise, Grandview and Sunnyside areas.** All cell phones in the area will get an Emergency Notice (similar to an Amber Alert)

Rainfall Gauge Threshold #2

When this threshold is reached, the following occurs: An **Emergency Notification Alert will be issued to ONLY to Mt. Elden Estates.** County and City Social Media will post this alert to Mt. Elden Estates.

Rainfall Gauge Threshold #1

When this threshold is reached the Flood Director will alert the Emergency Operations Center, City and County officials and activate personnel to monitor water flows.



After a Flood

Flash flooding can have devastating effects on your home and family. The following can help you safely address impacts from flood events.

Stay Safe After a Flood!

Stay Informed: Regularly check emergency notifications, local news, your weather radio and the NWS “Museum Fire Scar Flood Risk” web page at <https://www.weather.gov/fgz/MuseumFireFloodRisk> for updates.

Track Weather: Monsoon storms often come in groups. The danger is that storms following a flood event will often fall on saturated ground, especially late in the monsoon season. This can greatly increase the risk of additional flooding in your area from even a moderate monsoon storm. Regularly checking the Museum Flood area’s weather page at www.coconino.az.gov/MuseumFire/FloodArea/Weather for radar and rain gauge information can help you plan accordingly for what might be coming next.

Avoid Floodwaters: Keep your family and pets away from floodwater. Standing water hides many dangers including toxins, chemicals and sharp debris. Moving floodwater is especially dangerous as it can quickly sweep people and animals downstream. This happened in the Schultz Flood area where a 12-year-old girl was swept to her death by fast-moving floodwaters.

Avoid Impacted Areas: Please do not visit flood-impacted areas. In addition to being dangerous, your presence may hamper emergency operations, which include utility work to repair downed powerlines.

Heed Road Closed and Cautionary Signs: Road closure and other cautionary signs are put in place for your safety. Pay attention to them!

Post-Flood Private and City Street Maintenance

After a Museum Flood event, the County will respond to assist with clearing private roads in Mt. Elden Estates and Lockett Ranches to make them open and passable (but cannot conduct repairs). If floodwaters impact City streets, then the City will respond with assistance from the County if directed by the City. If flooding does occur, then please be aware of these operations in your neighborhoods!

What to Do After A Flood

The following are tips for protecting yourself and your family from the dangers of flooding and flash floods:

Returning Home

- Keep children and pets out of the affected area until cleanup has been completed. If you are away from your home during a flash flood event, then remain in a safe location until a notification is given that it is safe to return to your home.
- Use battery- or crank-powered flashlights if returning at night.
- Shut off electrical power and natural gas/propane tanks to avoid fire,

electrocution or explosions. If you smell gas or suspect a leak, then turn off the main gas valve, open all windows, and leave the house immediately. Do not turn on the lights or do anything that could cause a spark. Notify the gas company or fire department; do not return until you are told it is safe.

- Consult your utility company about using electrical equipment, including power generators.
- Avoid any downed power lines or wading in standing water, which may contain glass or metal fragments.

Tetanus Shots

If you have been exposed to floodwaters or have suffered injuries as a result of a flood, then obtain a tetanus shot from the County’s Health & Human Services Department or your doctor, especially if you haven’t received one in the last 5 years.

If you have open cuts or wounds, then take extreme precautions when walking through floodwaters to avoid contracting tetanus.

Cleanup of Home and Flood Water

If the cleanup is a smaller job that you can do yourself, then take precautions by wearing goggles, fitted mask (if appropriate), rubber boots, waterproof gloves and long-sleeved shirts and long pants.

If the cleanup is a large job, then call a professional who is experienced in cleaning up mold.

Dry out your house when you re-enter your home by using fans, air conditioning units and dehumidifiers.

Thoroughly clean all hard surfaces (flooring, furniture, countertops, appliances, sinks, etc.) with hot water and laundry or dish detergent, then disinfect with a household unscented chlorine bleach solution. To make and use a household bleach solution: Add 1 tablespoon of bleach to 1 quart (4 cups) of water, let stand for 3-5 minutes, then rinse the surface with clean water.

Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.

Seek immediate medical attention if you become injured or ill.

After completing the cleanup, wash your hands with soap and water. If the City water system or your well have been contaminated, then use water that has been boiled for one (1) minute but allow the water to cool sufficiently before washing your hands.

Wash the clothes worn during flood cleanup activities and clothes contaminated with flood or sewage water in hot water and detergent separate from uncontaminated clothes and linen.

Protect Yourself From Mold

Keep children, the elderly and people with asthma, allergies, breathing conditions or weakened immune systems away from mold.

Minimize the spread of mold spores by decreasing foot traffic; avoid rapid movements and cover moldy objects when removing them.

Food Safety After a Flood

This fact sheet provides tips for protecting yourself and your family from food-borne illness after a flood.

UNPACKAGED FOODS

- Do not eat any food that may have come in contact with flood water.
- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flood water.
- Discard all fresh or processed meat (except when in hermetically/airtight sealed cans), cheese, eggs, dairy and poultry products.
- Discard all dried bulk foods, grains, beans, nuts, dried fruits, dried milk and fried egg products.

SEALED FOIL OR CELLOPHANE AND PAPER PACKAGED FOODS

- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flood water, including those with screw caps and lids.
- Food products in sealed foil, cellophane or paper packages (e.g. candy, cereals, crackers, bread, chewing gum and shelled nuts) that were stored above flood level are often damaged by condensation. Examine all containers for leaks, breaks or other signs of damage. Discard any damaged food products.
- Discard cardboard juice, milk and baby formula boxes if they have come in contact with flood water because they cannot be effectively cleaned and sanitized.
- Discard food that is normally finely divided (e.g. powdered or granulated) but is found caked or clumped after a flood.
- Discard any food packages that have stains on the inner paper wrapper, even if the outer foil package looks undamaged.

FROZEN FOODS

- Discard all food products inside a refrigerator or freezer if they were contaminated by flood waters.
- If the inside of the refrigerator or freezer was not contaminated by flood waters, then food might be salvaged and refrozen if:
 - The products remained at, or below, 41°F at all times.
 - If the food is only partially thawed

and still has ice crystals. Note: the quality of these products may be impacted by refreezing.

- Completely thawed foods, including fruits, vegetables, meats, poultry, fish, shellfish and cooked food, should not be refrozen.
- Any vacuum-packed fish that is no longer frozen should be discarded.

CANNED AND GLASS PACKAGED FOODS

- Discard any home canned foods if they have come in contact with flood water.
- Discard any canned food product that has evidence of rust, leaks, swelling or broken/dented seams.
- Discard glass containers with porous, screw-top type closures of paper or fiber (e.g. mayonnaise, mustard, pickles and baby food) because they cannot be effectively cleaned and sanitized.
- Place canned and glass packaged foods in separate piles, by food type, to help with identification after the labels are removed for cleaning and sanitizing. Use these cans as soon as possible after cleaning and sanitizing as they may rust over time.
- All other canned and glass packaged foods can be washed and rinsed using potable water and detergent.
- After cleaning, submerge containers in a chlorine sanitizer solution made by mixing one (1) tablespoon of household bleach (must be unscented and have 5% available chlorine) with one (1) gallon of potable water. Keep containers submerged for at least fifteen (15) minutes. Allow containers to air dry before using.

WHEN IN DOUBT, THROW IT OUT!

- If the safety of a food product cannot be determined, then it is best to throw it out.
- Do not rely on odor or taste to assess the safety of a food product.
- Dispose of all food in plastic bags and ensure they are subsequently sealed to prevent access by insects or rodents.
- Remember, flood waters are heavily contaminated with disease organisms.

Make sure the working area is well ventilated.

Removal and cleaning are important because even dead mold may cause allergic reactions in some people.

Refer to the U.S. Environmental Protection Agency (EPA) document: *A Brief Guide to Mold and Moisture in Your Home*.

Safe Well Water

Do not drink the water from your well without testing it! Flooding may carry contaminated water into your well, even if your well was not submerged by floodwaters. There is also a danger of electric shock from well components.

Do not turn on equipment until it has been checked by a qualified electrician, well contractor or pump contractor. Visit www.azhealth.gov/

wellwater for information on how to test and disinfect your well.

Mosquito-Borne Illness

Standing water from flooding can result in an increased risk for mosquito-borne illness like West Nile Virus. People returning to flooded areas should protect themselves from mosquitoes by learning how to reduce the number of mosquitoes around their home and take personal precautions to avoid mosquito bites.

Agency Resources

- USDA – www.fsis.usda.gov
- Centers for Disease Control and Prevention – www.cdc.gov
- Food and Drug Administration – www.fda.gov
- Arizona Department of Health Services – www.azdhs.gov

Long-Term Flood Mitigation Projects – Completed



Long-term flood mitigation is critical in post-wildfire areas. This spring the FCD and the City completed projects to stabilize alluvial fans, reduce downstream sediment and improve channel capacity to convey floodwater more safely through neighborhoods.



Alluvial Fan Stabilization Project (FCD)

The **Alluvial Fan Stabilization Project** featured the installation of on-forest sediment reduction measures, commonly known as grade control, on the eastern portion of the watershed, which accounts for about 70 percent of the watershed's overall flows that could yield peak flows up to 100 times higher than pre-fire conditions. Left untreated, these fans would have become impaired and degraded significantly, creating

massive head cuts and clogging downstream drainages with sediment. Although no project can completely eliminate sediment, these measures will help to arrest erosion (known as head cutting) and thus the alluvial fan can continue to spread out floodwater, causing some sediment to drop out instead of allowing it to travel downstream and fill up off-forest drainage structures and impact private properties. This \$200,000 project was funded by a \$158,000 U.S. Forest Service (USFS) Regional Advisory Committee (RAC) Grant and the Flood Control District.



Linda Vista Drainage Crossing Improvements Project (CoF)

The City of Flagstaff's **Linda Vista Drainage Crossing Improvements Project** included the installation of a new stormwater pipe next to the existing stormwater pipe along with inlet and outlet protection measures to increase the capacity of the drainage system at this location, which is located on E. Linda Vista Dr. at the Spruce Avenue Wash crossing between N. Paradise Rd. and N. Adrienne Way. This \$285,000 flood mitigation project was completed this spring.

Spruce Avenue Wash Rock Vane Weirs Project (CoF)

Located on-forest just upstream of the northern terminus of Paradise Road, the City of Flagstaff's **Spruce Avenue Wash Rock Vane Weirs Project** featured the construction of seven (7) rock vane weirs in the stream channel of Spruce Avenue Wash. These weirs are intended to reduce

channelized head cutting, which results in the downstream movement of soil and potentially exposes a City of Flagstaff waterline as well as a critical gas line that serves approximately 30,000 residents including the Flagstaff Medical Center. This \$56,000 project was completed in August 2019.



Wildrose Basins Debris Removal Project (FCD)

The **Wildrose Basins Debris Removal Project** was a one-time project to remove fire and flood-related sediment and debris from the natural basins on Wildrose Trail in Mount Elden Estates. Even with last year's very limited monsoon season, flood flows with sediment collected in these basins, which could negatively impact adjacent and downstream properties. This \$20,000 project was funded primarily with \$15,000 from Supervisor Babbott's Community Initiative Funds. The remaining cost was paid for by the Flood Control District.

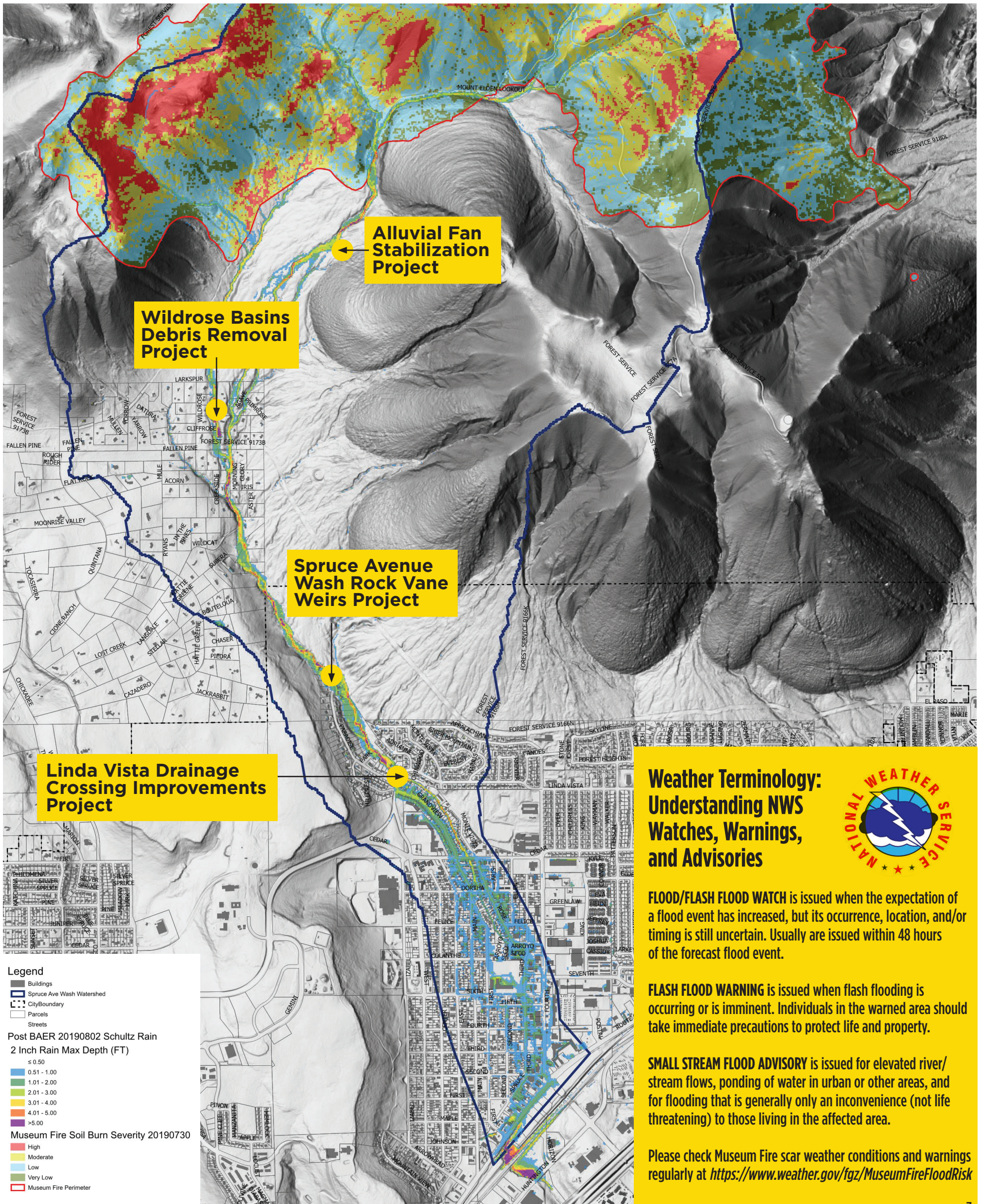


Project under development: Mt. Elden Estates Flood Mitigation Project (FCD)

The Flood Control District, in consultation with local engineering firms, is developing a broader plan for implementing a long-term **Mt. Elden Estates Flood Mitigation Project**. This project would include flood mitigation measures within Mt. Elden Estates and the Lockett Ranches neighborhoods. As the flood mitigation plan is developed, an independent engineering firm will conduct a no-adverse impact study for this project to determine if the project creates any upstream or downstream impacts, and if so determine the best approach to mitigating those impacts.

Development of the conceptual design for this long-term proposed flood mitigation project has been completed. This spring, the FCD applied to the Arizona Department of Emergency & Military Affairs for Federal Emergency Management Agency (FEMA) Hazardous Mitigation Grant Program (HMGP) grant funding. If approved, then the FEMA HMGP grant funding would cover \$315,800 of the estimated \$750,000 total mitigation cost.

Additional funding options are being pursued by the FCD through the Natural Resources Conservation Service. FCD staff has begun meeting with property owners to discuss the 60 percent-level engineering plans. All drainage easements from impacted private property owners must be secured prior to completion of the engineering or the project cannot go to construction. The goal for this project is to break ground in the spring of 2021.



United Way of Northern Arizona (UWNA) continues to coordinate efforts to provide flood area residents with assistance in preparing for the upcoming monsoon season. The County and the City thank United Way of Northern Arizona for organizing important volunteer events last summer and providing an opportunity for the broader community to assist their neighbors in the Museum Flood area. For more information contact United Way at 928-773-9813 or visit <https://nazunitedway.org/>.

Museum Flood Area Sandbag Sites



Elderly or disabled residents who require assistance repairing their sandbag walls can call (928) 679-8525 from 8 a.m. until 3 p.m., Monday through Friday. For more information on monsoon season sandbag locations and other things you can do to prepare for the monsoon season, please visit www.coconino.az.gov/MuseumFire/FloodArea.



Resources

Museum Flood Webpage www.coconino.az.gov/museumfire/floodarea
Museum Flood Email..... museumfloodinfo@coconino.az.gov

National Weather Service – Museum Flood Risk Webpage
www.weather.gov/fgz/MuseumFireFloodRisk

Call Center.....(928) 679-8525
Coconino County Website www.coconino.az.gov
Flagstaff City Website..... www.flagstaff.az.gov
Coconino National Forest Website www.fs.usda.gov/coconino
Police and Fire Departments..... Dial 911 in an Emergency
Coconino National Forest.....(928) 527-3600
Coconino National Forest Website www.fs.usda.gov/coconino
Cinder Lake Landfill..... (928) 527-1927
American Red Cross..... (928) 779-5494
UniSource Energy Services..... (928) 525-8103
Arizona Public Service (APS)..... (800) 253-9405
CenturyLink.....(800) 573-1311
SuddenLink Communications..... (928) 774-5336

2020 Museum Flood Guide Online: www.coconino.az.gov/2020MuseumFloodGuide
La Guía de preparación y mitigación de inundaciones de la “Museum Flood”
2020 esta disponible en linea: www.coconino.az.gov/GuiaDeInundaciones2020

The Community Effort Continues...

The Flood Control District and the City of Flagstaff would like to thank their partners, the Department of Forestry and Fire Management Wildland Fire crews, Arizona Department of Corrections – Perryville, the American Conservation Experience and Arizona Conservation Corps crews for their incredible performance last summer producing and installing sandbags in the neighborhoods and our contractors, most notably Tiffany Construction, for installation of the barriers. Transport of the sandbags and barriers and other needed activities were performed by the County’s Public Works Road Maintenance Division crews under the management of the FCD’s and City’s Engineering teams.

Most importantly, though, we would like to thank everyone in the flood area neighborhoods for their support during this mitigation effort, without which it would not have been possible. We look forward to continuing this partnership with you throughout the 2020 monsoon season!



Emergency Notifications

Coconino.az.gov/ready